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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Jennifer Dean

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EXAMINER

WOLLSCHLAGER, JEFFREY MICHAEL

ART UNIT

PAPER NUMBER

1791

NOTIFICATION DATE

DELIVERY MODE

07/14/2009

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/749,071	Applicant(s) DEAN ET AL.	
	Examiner JEFFREY WOLLSCHLAGER	Art Unit 1791	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 May 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-6,8-11,13-15 and 17-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 3-6, 8-11, 13-15 and 17-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

Prosecution on the merits of this application is reopened in view of the granted petition for revival of an unintentionally abandoned application.

Response to Amendment

Applicant's amendment to the claims filed May 28, 2008 has been entered. Claims 6, 13, 14, 17, 19 and 21 are currently amended. Claims 2, 7, 12, and 16 have been canceled. Claims 1, 3-6, 8-11, 13-15 and 17-21 are pending and under examination. Applicant's amendment to the claims has overcome the objection to the claims and the 35 USC 112, second paragraph rejection set forth in the previous office action.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1, 3-6, 8-11, 15 and 17-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over LaCasse et al. (U.S. 5,877,254) in view of Sacks et al. (U.S. 3,048,263) and

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any one of Parthasarathy et al. (U.S. 6,225,391), Smissen (U.S. 3,433,653) or Hen et al. (WO 96/25451).

Regarding claims 1 and 18, LaCasse et al. disclose a method of producing an anti-fog composition comprising ionic or nonionic anti-fog additives (col. 4, lines 42-61), for aromatic thermoplastic articles, such as polycarbonate and polyethylene terephthalate, and for various polyolefins (col. 3, lines 48-57), wherein the composition may be coated with the thermoplastic material and further processed and molded (col. 3, lines 48-52) to produce a finished article (Abstract). Additionally, LaCasse et al. disclose soaking the produced article in water and exposing the article to a mist of water (Examples 2 and 5). LaCasse et al. do not form a blend of raw material aromatic thermoplastic polymer and an ionic anti-fog additive. Further, while LaCasse et al. expose the article to water in product testing, they do not disclose exposing the article to water as a conditioning step.

However, Sacks et al. disclose that in applications utilizing anti-fog agents in plastic films that both coating and incorporating methods are known for bringing the anti-fog agent and plastic together, and that incorporating the anti-fog additive with the plastic is the preferred method (col. 3, lines 18-47). Additionally, each of Parthasarathy et al. (col. 6, lines 66-col. 7, lines 10), Smissen (Abstract; col. 1, lines 47-50 and 57-63) and Hen (page 4, lines 23-25; page 8, lines 16-20) individually disclose methods of conditioning plastics that contain anti-fog agents by exposing them to water to enhance and activate their performance by hydrolyzing the anti-fog additive.

Therefore it would have been *prima facie* obvious to one having ordinary skill in the art at the time of the claimed invention to have incorporated the anti-fog agents disclosed by LaCasse et al. into the polymeric materials disclosed by LaCasse et al. to form a blend of polymer and anti-fogging additive instead of a coating of anti-fogging additive on the surface of the polymer,

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as suggested by Sacks et al., for the purpose, as suggested by Sacks et al., of reducing additional processing steps and to realize a longer lasting fog resistant product than is achievable from merely coating the agent on the surface of the plastic (col. 3, lines 18-46).

Further, it would have been *prima facie* obvious to one having ordinary skill in the art at the time of the claimed invention to have modified the method of LaCasse et al. and to have performed a conditioning step to enhance and activate the fog resistant agents, as suggested individually by each of Parthasarathy, Smissen, and Hen et al., to provide a high quality material fully ready for its final application prior to being put into service.

The examiner notes that one having ordinary skill would have had a reasonable expectation of success when performing the incorporating and conditioning/activation steps with the plastics disclosed by LaCasse et al. since i) LaCasse et al. disclose polyolefin films, PET films and polycarbonate films as equivalent alternatives and ii) one having ordinary skill would have realized the properties of the anti-fogging agents themselves (e.g. hydrophilicity) exist, to a large degree, independently, of the polymers employed.

As to claims 3 and 4, LaCasse et al. disclose exposure for extended periods of time during testing (Examples 1, 2 and 5). Further, Parthasarathy disclose the activation depends on time, temperature and relative humidity (col. 7, lines 12-18).

As to claims 5 and 6, LaCasse et al. disclose PET and polycarbonate (col. 3, lines 52-58).

As to claim 8, LaCasse et al. disclose the ionic anti-fog additive is a sulfonic acid salt (col. 5, lines 6-10).

As to claims 9 and 10, LaCasse et al. disclose the claimed sulfonic acid salts (col. 5, lines 11-30; col. 6, lines 39-53).

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As to claim 11, which depends from claim 21, LaCasse et al. disclose the surfactant may be used in concentrations of about 10% to about 40% of total solids of the composition (col. 6, lines 28-31; col. 7, lines 1-17).

As to claim 15, Sacks et al. describe incorporating the additive instead of employing it as a coating (col. 3, lines 18-47). It would have been obvious to combine the teaching of LaCasse et al. with Sacks et al. for the reasons set forth above.

Regarding claims 17 and 19-21, LaCasse et al. disclose a method of producing an anti-fog composition comprising ionic or nonionic anti-fog additives (col. 4, lines 42-61), for aromatic thermoplastic articles, such as polycarbonate and polyethylene terephthalate, and for various polyolefins (col. 3, lines 48-57), wherein the composition may be coated with the thermoplastic material and further processed and molded (col. 3, lines 48-52) to produce a finished article (Abstract). LaCasse et al. disclose that nonionic additives polyethylene glycol, polyethylene glycol/polypropylene copolymers, and mixtures thereof may also be employed (col. 3, lines 43-45). Additionally, LaCasse et al. disclose soaking the produced article in water and exposing the article to a mist of water (Examples 2 and 5). LaCasse et al. do not form a blend of raw material aromatic thermoplastic polymer and an ionic anti-fog additive. Further, while LaCasse et al. expose the article to water in product testing, they do not disclose exposing the article to water as a conditioning step.

However, Sacks et al. disclose that in applications utilizing anti-fog agents in plastic films that both coating and incorporating methods are known for bringing the anti-fog agent and plastic together, and that incorporating the anti-fog additive with the plastic is the preferred method (col. 3, lines 18-47). Additionally, each of Parthasarathy et al. (col. 6, lines 66-col. 7, lines 10), Smissen (Abstract; col. 1, lines 47-50 and 57-63) and Hen (page 4, lines 23-25; page 8, lines 16-20) individually disclose methods of conditioning plastics that contain anti-fog agents

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by exposing them to water to enhance and activate their performance by hydrolyzing the anti-fog additive.

Therefore it would have been *prima facie* obvious to one having ordinary skill in the art at the time of the claimed invention to have incorporated the anti-fog agents disclosed by LaCasse et al. into the polymeric materials disclosed by LaCasse et al. to form a blend of polymer and anti-fogging additive instead of a coating of anti-fogging additive on the surface of the polymer, as suggested by Sacks et al., for the purpose, as suggested by Sacks et al., of reducing additional processing steps and to realize a longer lasting fog resistant product than is achievable from merely coating the agent on the surface of the plastic (col. 3, lines 18-46).

Further, it would have been *prima facie* obvious to one having ordinary skill in the art at the time of the claimed invention to have modified the method of LaCasse et al. and to have performed a conditioning step to enhance and activate the fog resistant agents, as suggested individually by each of Parthasarathy, Smissen and Hen et al., to provide a high quality material fully ready for its final application prior to being put into service.

The examiner notes that one having ordinary skill would have had a reasonable expectation of success when performing the incorporating and conditioning/activation steps with the plastics disclosed by LaCasse et al. since i) LaCasse et al. disclose polyolefin films, PET films and polycarbonate films as equivalent alternatives and ii) one having ordinary skill would have realized the properties of the anti-fogging agents themselves (e.g. hydrophilicity) exist, to a large degree, independently, of the polymers employed.

Claims 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over LaCasse et al. (U.S. 5,877,254) in view of Sacks et al. (U.S. 3,048,263) and any one of Parthasarathy et al. (U.S. 6,225,391), Smissen (U.S. 3,433,653) or Hen et al. (WO 96/25451),

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as applied to claims 1, 3-6, 8-11, 15 and 17-21 above, and further in view of Tu et al. (U.S. 3,933,407).

As to claims 13 and 14, the combination teaches the method set forth above. LaCasse et al. do not disclose the anti-fog additive as claimed. However, Tu et al. disclose antifogging additives meeting the claimed limitations (broadly: col. 4, line 12-col. 8, line 7; particularly note: col. 4, lines 12-54; col. 7, lines 1-57 and even further combined with other crosslinking materials such as ethylene glycol, divinyl ether (col. 7, lines 59-65)).

Therefore it would have been *prima facie* obvious to one having ordinary skill in the art at the time of the claimed invention to have employed the anti-fog agent disclosed by Tu et al. in the method disclosed by LaCasse et al. since Tu et al. suggest the material is an alternative means of accomplishing fog resistance with synergistic effects (Abstract).

Response to Arguments

Applicant's arguments filed May 28, 2008 have been fully considered. Applicant's arguments regarding the rejections based upon Sawada have been fully considered and they are persuasive. Accordingly, the rejections have been withdrawn. Applicant's amendment to the claims has overcome the rejections based upon Hen. Accordingly, the rejections have been withdrawn. Applicant's arguments regarding the rejections based up LaCasse et al. alone and LaCasse et al. in view of Tu et al. alone have been fully considered and they are persuasive. Accordingly, the rejections have been withdrawn.

Applicant's arguments directed to the rejection of LaCasse et al. in view of Sacks et al. and any one of Parthasarathy, Smissen, or Hen et al. have been fully considered, but they are not persuasive.

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Applicant argues that LaCasse et al. fail to teach blending the anti-fog additive with an aromatic thermoplastic and that since Sacks is directed to polyolefin polymers one would not expect success in replacing the nonaromatic polymer of Sacks with the aromatic polymer of LaCasse et al. and as such one would not have found it obvious to modify LaCasse et al. as set forth in the rejection. This argument is not persuasive. Initially, for clarification, it is noted that LaCasse et al. is the primary reference being modified by Sacks. Further, the examiner notes that LaCasse et al. disclose polyolefin films, PET films and polycarbonate films as being suitable for their method thereby suggesting applicability over a broad array of polymeric materials. Further, one having ordinary skill would have realized the properties of the anti-fogging agents themselves (e.g. hydrophilicity) exist, to a large degree, independently of the polymers employed. Further, Sacks et al. provides a highly analogous discussion for producing anti-fogging polymeric materials and explicitly compares coating methods and blending methods and gives reasons that would also be applicable to resins other than polyolefins, including aromatic polymers, (col. 3, lines 18-46). As such, the examiner maintains that one having ordinary skill would have found it obvious to have modified the method of LaCasse et al. and to have blended the anti-fog agent with the polymer instead of coating the anti-fog agent upon the polymer.

As to the Parthasarathy, Smissen, and Hen references, the examiner notes that these references are employed in the alternative for their teaching of conditioning an anti-fogging material in an aqueous environment and are not employed in the combination regarding the blending limitation. Further, Hen (page 7, lines 13-23; page 8, lines 4-20) suggest various polymer compositions are applicable for conditioning. The examiner maintains that one having ordinary skill would have had a reasonable expectation of success, in view of the analogous (i.e. producing anti-fogging thermoplastic articles) teachings of each of Parthasarathy, Smissen, and

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Hen and that one having ordinary skill in the art would have been motivated to condition the articles of LaCasse et al. for the reasons set forth in the rejection.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US 6,187,896; US 5,316,825; US 4,983,648 and US 3,720,652 disclose blending aromatic thermoplastics with anti-fogging agents.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JEFFREY WOLLSCHLAGER whose telephone number is (571)272-8937. The examiner can normally be reached on Monday - Thursday 6:45 - 4:15, alternating Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina Johnson can be reached on 571-272-1176. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jeff Wollschlager/
Examiner, Art Unit 1791

July 10, 2009